

**TRANSMITTAL LETTER TO THE UNITED STATES
DESIGNATED/ELECTED OFFICE (DO/EO/US)
CONCERNING A SUBMISSION UNDER 35 U.S.C. 371**

ATTORNEY'S DOCKET NUMBER
15670-029US1 SD2003-252

U.S. APPLICATION NO. (if known, see 37 C.F.R. 1.5)

10/558842

INTERNATIONAL APPLICATION NO.
PCT/US2004/017237

INTERNATIONAL FILING DATE
1 June 2004

PRIORITY DATE CLAIMED
30 May 2003

TITLE OF INVENTION

Circuit Network Analysis Using Algebraic Multigrid Approach

APPLICANT(S) FOR DO/EO/US

Chung-Kuan Cheng and Zhengyong Zhu

Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:

1. ☒ This is a **FIRST** submission of items concerning a submission under 35 U.S.C. 371.
2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a submission under 35 U.S.C. 371.
3. ☐ This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (21) indicated below.
4. ☒ The US has been elected (Article 31).
5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))
 - a. ☒ is attached hereto (required only if not communicated by the International Bureau).
 - b. ☐ has been communicated by the International Bureau.
 - c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US).
6. ☐ An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).
 - a. ☐ is attached hereto.
 - b. ☐ has been previously submitted under 35 U.S.C. 154(d)(4).
7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))
 - a. ☐ are attached hereto (required only if not communicated by the International Bureau).
 - b. ☐ have been communicated by the International Bureau.
 - c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.
 - d. ☒ have not been made and will not be made.
8. ☐ An English language translation of amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).
9. ☐ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).
10. ☐ An English language translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11 to 20 below concern document(s) or information included:

11. ☐ An Information Disclosure Statement under 37 C.F.R. 1.97 and 1.98.
12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 C.F.R. 3.28 and 3.31 is included.
13. ☒ A preliminary amendment.
14. ☐ An Application Data Sheet under 37 C.F.R. 1.76.
15. ☐ A substitute specification.
16. ☐ A power of attorney and/or change of address letter.
17. ☐ A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 C.F.R. 1.821 - 1.825.
18. ☐ A second copy of the published international application under 35 U.S.C. 154(d)(4).
19. ☐ A second copy of the English language translation of the international application under 35 U.S.C. 154(d)(4).

CERTIFICATE OF MAILING BY EXPRESS MAIL
Express Mail Label No. EV471534826US
Date of Deposit: November 29, 2005

| | | | | | |
|---|--------------|---|---------|--|--------|
| U.S. APPLICATION NO. (filed on or after 9/8/00) 10/558842 | | INTERNATIONAL APPLICATION NO. PCT/US2004/017237 | | ATTORNEY'S DOCKET NUMBER 15670-029US1 | |
| 20. Other items or information: Copy of International Search Report (4 pages) | | | | | |
| The following fees have been submitted | | | | CALCULATIONS PTO USE ONLY | |
| 21. <input checked="" type="checkbox"/> Basic national fee (37 CFR 1.192(a)).....\$300 | | | | \$300.00 | |
| 22. <input checked="" type="checkbox"/> Examination fee (37 CFR 1.492(c)) If the written opinion prepared by ISA/US or the international preliminary examination report prepared by the IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)\$0 All other situations\$200 | | | | \$0.00 | |
| 23. <input checked="" type="checkbox"/> Search fee (37 CFR 1.92(b)) If the written opinion of the ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)\$0 Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority.....\$100 International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB.....\$400 All other situations\$500 | | | | \$0.00 | |
| Total of 21, 22 and 23 = | | | | \$300.00 | |
| <input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing in compliance with 37 CFR 1.821(c) or (e) or computer program listing filed in an electronic medium) (37 CFR 1.492(j)). The fee is \$250 for each additional 50 sheets of paper or fraction thereof. | | | | | |
| Total Sheets | Extra Sheets | Number of each additional 50 or fraction thereof (round up to a whole number) | RATE | | |
| -100 = | /50= | | X \$250 | \$0.00 | |
| Surcharge of \$130 for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 C.F.R. 1.492(h)). | | | | \$0.00 | |
| CLAIMS | NUMBER FILED | NUMBER EXTRA | RATE | | |
| Total Claims | 26 - 20 = | 6 | x \$50 | \$300.00 | |
| Independent Claims | 4 - 3 = | 1 | x \$200 | \$200.00 | |
| MULTIPLE DEPENDENT CLAIM(S) (if applicable) | | | + \$360 | \$0.00 | |
| TOTAL OF ABOVE CALCULATIONS = | | | | \$800.00 | |
| <input checked="" type="checkbox"/> Applicant claims small entity status. See 37 C.F.R. 1.27. Fees above are reduced by 1/2. | | | | \$400.00 | |
| SUBTOTAL = | | | | \$400.00 | |
| Processing fee of \$130 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 C.F.R. 1.492(i)) | | | | \$0.00 | |
| TOTAL NATIONAL FEE = | | | | \$400.00 | |
| Fee for recording the enclosed assignment (37 C.F.R. 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 C.F.R. 3.28, 3.31). \$40.00 per property | | | | \$0.00 | |
| TOTAL FEES ENCLOSED = | | | | \$400.00 | |
| | | | | Amount to be refunded: | \$0.00 |
| | | | | Amount to be charged: | \$0.00 |

- a. ☒ A check in the amount of \$400.00 to cover the above fees is enclosed.
- b. ☐ Please charge my Deposit Account No. 06-1050 in the amount of \$0.00 to cover the above fees.
A duplicate copy of this sheet is enclosed.
- c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 06-1050. A duplicate copy of this sheet is enclosed.
- d. ☐ Fees are to be charged to a credit card. **WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.

NOTE: Where an appropriate time limit under 37 C.F.R. 1.495 has not been met, a petition to revive (37 C.F.R. 1.137(a) or (b) must be filed and granted to restore the International Application to pending status.

SEND ALL CORRESPONDENCE TO:

PTO Customer No: 20985

SIGNATURE

Bing Ai

NAME

43,312

REGISTRATION NUMBER

10/558842

Attorney's Docket No.: 15670-029US1 / SD2003-252

IAP9 Rec'd PCT/PTO 29 NOV 2005

APPLICATION
FOR
UNITED STATES LETTERS PATENT

TITLE: CIRCUIT NETWORK ANALYSIS USING ALGEBRAIC
MULTIGRID APPROACH

APPLICANT: CHUNG-KUAN CHENG AND ZHENGYONG ZHU

CERTIFICATE OF MAILING BY EXPRESS MAIL

Express Mail Label No. EV471534826US

November 29, 2005
Date of Deposit